

IN THE CLAIMS:

The following is a complete listing of the claims and reflects all changes currently being made to the claims. This listing supersedes all earlier versions and all earlier listings of the claims:

1. (Cancelled).

2. (Cancelled).

3. (Cancelled).

4. (Cancelled).

5. (Currently Amended) A method for manufacturing an electron-source substrate comprising the steps of:

electrifying a plurality of electric conductors arranged on a substrate in a hermetic atmosphere so as to impart an electron-emission function to part of the electric conductors;

setting an average temperature difference during the electrifying between a region  $S_0$  in which the plurality of electric conductors on the substrate are arranged and a region  $S_1$  located on a periphery of the region  $S_0$  at 15°C or more,

wherein the substrate satisfies the relational expression:

$$\underline{L_1/L_0 > E\alpha\Delta T/\sigma_{th} - 1},$$

where  $L_0$ [m] represents the width of the region  $S_0$

$L_1$ [m] represents the width of the region  $S_1$

$\Delta T$ [K] represents the average temperature difference

$E$ [Pa] represents Young's modulus of the substrate

$\alpha$ [/K] represents the coefficient of linear thermal expansion of the

substrate, and

$\sigma_{th}$ [Pa] represents the material constant of the substrate;

cutting the substrate into desired sizes after the electrifying; and

~~A manufacturing method according to Claim 3, further comprising the steps~~

~~of chamfering, polishing, and cleaning the periphery of the substrate after the~~

~~cutting.~~

6. (Cancelled).

7. (Cancelled).